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Report W3137-NIS-N Natura Impact Statement for the proposed Fethard-On-Sea Sewerage Scheme (northern section)

Report for Byrne Looby
PH McCarthy
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1 Introduction

BEC Consultants Ltd has been commissioned to undertake a Stage 2 Appropriate Assessment (Natura Impact Statement – NIS) for the proposed sewerage scheme at Fethard-On-Sea, Co. Wexford. This is required under Article 6(3) of the EU Habitats Directive as per part XAB of the Planning and Development Acts 2000-2010. This report presents information on the Natura 2000 sites (Special Areas of Conservation – SACs, or Special Protection Areas – SPAs) that may potentially be impacted upon by the proposed project and assesses the effect of the project on the integrity of Natura 2000 sites, with regard to the Conservation Objectives and the structure and function of the habitats. This report has been prepared with reference to the following documentation:

- DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government.
- EC (2002) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission.

The Appropriate Assessment process focuses on the Natura 2000 sites, their Qualifying Interests and the related Conservation Objectives. The term Qualifying Interests will be used to refer both to the bird species listed as Features of Interest for SPAs and to the habitats and species listed as Qualifying Interests for SACs.

1.1 Scope of this report

This NIS relates to the northern section of the project that extends from the existing primary treatment tank at Tay Lane south to the R734. The proposed development area to the southeast at Ramstown, east of the R734 through to the marine outfall to the Celtic Sea, is addressed in a separate NIS (O'Neill & Perrin 2016).

1.2 Background to Appropriate Assessment

Natura 2000 sites are a network of sites across the member states of the European Community which are deemed to be of international importance for their habitats and/or species. This network comprises SACs designated under the European Union's Habitats Directive (92/43/EEC) and SPAs designated under the Birds Directive (2009/147/EC replacing 79/409/EEC). Both Directives are transcribed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011).

Article 6(3) of the Habitats Directive states: "*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon either individually or in combination with other plans or projects, shall be subject to* ***Appropriate Assessment*** *of its implications for the site in view of the site's conservation objectives*."

As such, any project likely to have a significant effect, either individually or in combination with other plans and projects, on the Conservation Objectives of Natura 2000 sites must undergo an assessment of the implications of this project on the relevant Natura 2000 sites.

It is detailed in the guidance documents prepared by the Department of the Environment, Heritage and Local Government (DEHLG 2009) and the European Commission (EC 2002) that a staged approach to assessment is required. A conclusion is made at the end of each stage of the assessment as to whether the project should proceed to the next stage.

- Stage 1: Screening - This stage determines whether Appropriate Assessment is necessary. The proposed project is defined and an assessment is made of the potential for significant effects upon the Natura 2000 network, either alone or in combination with other projects.

Plans or projects directly connected with, or necessary to the nature conservation management of the site do not require an Appropriate Assessment.

- Stage 2: Appropriate Assessment - If there is potential for a significant effect on the Natura 2000 network, an Appropriate Assessment is required. During this stage the impact of the project on the Conservation Objectives of the Natura 2000 sites is assessed and measures are proposed to avoid or reduce these impacts such that they do not result in a significant impact. The outcome of the assessment establishes whether the plan or project will have a significant adverse effect on the integrity of the Natura 2000 site, its Qualifying Interests and associated Conservation Objectives. Factors such as the magnitude, extent, duration and reversibility of the effect are considered in this assessment.
- Stage 3: Alternative Solutions - Before a project that has adverse effects on a Natura 2000 site can proceed to the consideration of imperative reasons of overriding public interest it must be objectively concluded that no less-damaging alternative solutions exist.
- Stage 4: Imperative Reasons of Overriding Public Interest ("IROPI") - Where no alternative options exist and adverse impacts remain but imperative reasons of overriding public interest for the project exist, compensatory measures must be implemented to ensure the overall coherence of the Natura 2000 site.

Stage 1 Appropriate Assessment Screenings have been carried out by Byrne Looby and it has been concluded that a Stage 2 Appropriate Assessment is required because of the location of some of the works in a Natura 2000 site. BEC Consultants Ltd has been commissioned to carry out this Stage 2 Appropriate Assessment.

1.3 Appropriate Assessment methodology

Carrying out a Stage 2 Appropriate Assessment requires the following information:

- A description of the project (see Section 2)
- Identification of relevant Natura 2000 sites and compilation of information on their qualifying interests and conservation objectives (see Section 4)
- Assessment of the direct, indirect and cumulative effects of the project (Section 5)
- Details of any mitigation measures (Section 6)
- AA Conclusion (Section 8)

A desk review of the Natura 2000 sites in the vicinity of the proposal was carried out using information available from the National Parks and Wildlife Service (NPWS) website (www.npws.ie). The potential for affecting these conservation objectives was assessed through considering the nature, size and location of the project in relation to the Natura 2000 sites in addition to hydrological connectivity.

2 Project background

2.1 Project description

Fethard-On-Sea is located near Hook Head in County Wexford. The village has a winter population of 270 persons, which increases during the peak summer months from tourists using holiday homes and caravan parks.

The existing Fethard wastewater treatment plant (WwTP) consists of a primary treatment tank, which provides primary treatment of the effluent. The effluent then discharges into a stream flowing from Grangeville into the saltmarsh via a 225 mm-diameter outfall pipe. This stream then enters Fethard

Bay. There is an overflow pipe located just before the primary treatment tank at the inlet channel. This rejoins the outfall pipe (primary discharge) at a manhole located at the end of the primary treatment tank.

The present level of treatment is not in accordance with the requirements of the Urban Wastewater Directive and the Urban Waste Water Treatment Regulations, which requires secondary treatment (Byrne Looby Partners 2012). The saltmarsh at Fethard was surveyed as part of the National Parks and Wildlife Service's Saltmarsh Monitoring Project (McCorry & Ryle, 2009) and the report authors concluded that eutrophication from the treatment plant was affecting the size and biomass of stands of Annual Sea-blite (*Suaeda maritima*) at Fethard and also appeared to promote the spread of the invasive Common Cord-grass (*Spartina anglica*).

To address the wastewater treatment and pumping requirements at Fethard, Phase 1 is to provide for a treatment capacity of 470 population equivalent (P.E.) in wintertime, and 1400 P.E in summertime (with provision for upgrade to 600 P.E. (wintertime) and 1800 P.E. (summertime) in Phase 2), along with associated rising mains, sea outfall and pumping station. The existing primary treatment tank is to be decommissioned, along with the existing outfall to the estuary, with the new pumping station to be located at this position, with associated storm overflow.

The 2012 treated effluent monitoring results for the existing treatment plant are shown in Table 1, together with the Emission Limit Values (ELVs) required by the new treatment plant under the terms of the wastewater discharge licence (licence register number D0241-01). It should be noted that these ELVs refer to the proposed marine outfall that will discharge to the Celtic Sea, rather than to the proposed storm overflow that will enter the estuary. As the marine outfall is located in the southeastern section of the Fethard sewerage scheme, it is not covered by this NIS and the data are included here merely for comparison. There are no ELVs specified for the storm overflow in the discharge licence.

Table 1. WwTP monitoring results 2012 from 12 samples and required ELVs for new treatment plant (source: EPA 2014). BOD=Biochemical Oxygen Demand; COD=Chemical Oxygen Demand.

	BOD (mg/l)	**COD (mg/l)**	**Suspended solids (mg/l)**	**Ammonia (mg/l)**	**Orthophosphate (mg/l)**
2012	61	169	54	17	2
ELVs for new WwTP	25	125	35	15	Not specified

The proposed sewerage scheme will commence in the southern part of the village centre. A pumping station and storage tank will be constructed at Tay Lane on the site of the existing primary treatment plant. The construction works at Tay Lane will require excavation for a reinforced concrete pumping station sump and storage tank, and burial of the storm overflow outfall to empty at the existing discharge point. The waste water will be pumped to the new WwTP at Ramstown, south of Fethard village. This will require pipe-laying in the road across Fethard Bridge and on to the new WwTP and a final effluent outfall to the Celtic Sea, approximately 2 km southwest of Ingard Point.

Construction of the pipeline will be along Sunny Row and Bam Mills Road crossing Fethard Bridge, it will proceed approximately southwards along the road, then turn east (proposed gravity sewer section) to extend along a farm track, finally crossing fields to terminate at the site of the proposed WwTP in Ramstown.

As stated above, this NIS relates to the northern section of the proposed development that extends from the existing primary treatment tank at Tay Lane south to the R734, covering an area of 1.1 ha. The remainder of the proposed scheme to the southeast, from the R730 through to the new WwTP and marine outfall (total area 3.5 ha), is described and assessed in detail in a separate NIS (O'Neill & Perrin 2016), but will also be addressed in the Cumulative Impacts section of this report.

A summary of the full programme of proposed works is presented below, together with the section (northern or southeastern) in which the works will take place. Appendix 1 contains the site layout showing where the works will take place.

Northern section:

- Decommissioning and removal of existing primary treatment tank and associated outfall.
- Construction of new collector main, pumping station and emergency storm overflow (to be buried and discharge to the same point as the existing outfall to the estuary) at the site of the existing primary treatment tank.
- New rising main from pumping station site to new WwTP.

Southeastern section:

- Construction of new WwTP with treatment capacity of 470 P.E. wintertime and 1400 P.E summertime (with provision for upgrade to 600 P.E. (wintertime) and 1800 P.E. (summertime) in Phase 2) at Ramstown.
- New drilled marine outfall.
- New rising main from pumping station site to new WwTP.
- Liquid residuals – assessment of discharge to surface water and treatment and recycling.
- Sludge management – gravity settlement and decant off site.

2.2 Project timing and duration

The construction phase of the project is expected to commence in the first half of 2019, with the WwTP expected to be operational during the second half of 2020.

2.3 Local resource requirements

It is understood that there will be no local resource requirements, such as groundwater abstraction, during the construction or operational phases of the proposed development.

2.4 Disturbance

Noise levels will increase due to demolition work and the operation of construction machinery. Construction works will result in increased traffic and movement of machinery and personnel.

Excavation of soil and other material will result in disturbance of habitats, increasing the risk of spreading any alien invasive species that occur within the footprint of the works.

Increased light levels in the vicinity of construction works may potentially disturb wildlife in the area. During the construction phase, site lighting will be in operation to ensure safe operation and maintenance of all items of equipment on site during periods of darkness. There will be external security lighting on buildings where machinery is stored and pole-mounted lighting around the site for illuminating early morning or late evening working.

2.5 Potential emissions relating to the construction phase

During the construction phase of the proposed project there is the potential for pollution or silting of rivers, streams, watercourses, surface water drains and wetland habitats.

Construction will also generate spoil and waste consisting of surplus or waste materials, e.g., soil or concrete, which will be transported off site for disposal. Some of this spoil may consist of bituminous

materials or other spoil contaminated with Polycyclic Aromatic Hydrocarbons (PAHs). Any material to be excavated from an Annex I habitat will be managed as detailed in Section 6.

Decommissioning of the existing primary treatment tank and outfall may result in the spillage or discharge of effluent held within the system.

There will be increases in the level of dust due to the excavation of soil and demolition of existing structures.

Traffic levels in and out of the proposed development area will increase during construction to facilitate employees of the contractor carrying out demolition work, building the pumping station and storage tank, and laying the pipes. Additional vehicles during construction will also be required for the transportation of surplus spoil and other waste material off site. The main potential emissions from increased transportation are sedimentation and oil spills.

The above emissions are discussed in Section 5, and mitigation measures to reduce their impacts are detailed in Section 6.

2.6 Potential emissions relating to the operation of the proposed sewerage scheme

During the operation of the northern section of the proposed sewerage scheme, the main emission relevant to this NIS is discharge from the storm overflow. This overflow discharges to the same point as the existing primary outfall, i.e., into a stream that empties into Fethard Bay. This stream is part of the saltmarsh's creek system, which is one of the structural criteria of the Annex I saltmarsh habitats (see Section 4) that contribute to the conservation status assessment of the Bannow Bay SAC. It is understood that discharge from this overflow will be less frequent than current discharges and will consist of dilute supernatant. However, there are no data available on the expected frequency or water quality of the discharge from the proposed overflow, and therefore a comparison cannot be made between the current primary outfall and the proposed overflow. The quality of the discharge from the current primary outfall has been noted as having a negative effect on the saltmarsh habitat through eutrophication (McCorry & Ryle, 2009). Therefore it is considered that, provided the proposed sewerage scheme results in a significant reduction in the levels of pollutants and reduction in frequency of discharge to the estuary, then the proposed scheme will have a positive impact on water quality compared to the existing treatment tank. However, some impact remains possible due to discharge of effluent during storm events. This is discussed further in Section 5.

It is not expected that the number or type of vehicles accessing the site during the operation of the new sewerage scheme will differ significantly from previous levels.

2.7 Receiving environment

2.7.1 Field survey

A field survey was conducted at the proposed project site on the 4th April 2016 by Dr Philip Perrin and Simon Barron of BEC Consultants. In the following site description, habitats are classified according to the Irish habitat classification system (Fossitt 2000). The name and code of each habitat type is given. Where applicable, Annex I habitats of the EU Habitats Directive are also described using the official habitat codes (EC, 2013). Nomenclature for vascular plants follows Stace (2010).

The following two EU Annex I habitats were recorded in the survey area:

- 1140 Mudflats and sandflats not covered by seawater at low tide (hereafter referred to as 1140 Mudflats and sandflats) (Appendix 2, Plate 1)
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) (hereafter referred to as 1330 Atlantic salt meadows) (Appendix 2, Plate 2)

The following 14 Fossitt (2000) habitats were recorded in the survey area:

- BC1 Arable crops
- BL1 Stone walls and other stonework
- BL3 Buildings and artificial surfaces
- CM1 Lower salt marsh
- CM2 Upper salt marsh
- CW2 Tidal rivers
- ED2 Spoil and bare ground
- GA1 Improved agricultural grassland
- GA2 Amenity grassland (improved)
- GS2 Dry meadows and grassy verges
- LS4 Mud shores
- WL1 Hedgerows
- WL2 Treelines
- WS1 Scrub

The survey area, and the habitats and species recorded therein, are described below in five sections: Existing primary treatment tank location, Fethard Bridge, East of bridge, West of bridge, and the Road (R734). These five locations run sequentially from the existing primary treatment tank location southwards to where a farm track, which runs parallel to and south of Quay Road, joins the R734 from the east.

Existing primary treatment tank location

The existing primary treatment tank (Appendix 2, Plate 3) is located in an ungrazed field to the east of the main street in Fethard. The area immediately surrounding the tank is fenced to prevent access, but the vegetation inside and outside the fence is very similar. It consists of a rank sward dominated by Cock's-foot (*Dactylis glomerata*). Herb cover within this sward is not very high, but includes the following species: Hogweed (*Heracleum sphondylium*), Knapweed (*Centaurea nigra*), Lesser Celandine (*Ficaria verna*), Ribwort Plantain (*Plantago lanceolata*), Creeping Buttercup (*Ranunculus repens*), Broad-leaved Dock (*Rumex obtusifolius*) and Common Nettle (*Urtica dioica*). It is best classified as GS2 Dry meadows and grassy verges.

Along the southeast edge of the field, at the top of a bank above the saltmarsh, is a strip of WS1 Scrub consisting mainly of Blackthorn (*Prunus spinosa*) and Bramble (*Rubus fruticosus* agg.). It has probably developed from an old hedgerow. Common Gorse (*Ulex europaeus*) and Sycamore (*Acer pseudoplatanus*) occur in this scrub, but are infrequent. Fox (*Vulpes vulpes*) tracks and droppings were found in this area. This scrub is potentially used by the Annex II species Otter (*Lutra lutra*) as a resting place (see *East of bridge* section below for further details).

The route of the proposed pipeline leads from the existing primary treatment tank down to the gate leading into this field from the main street. Here is found a small section of WL2 Treelines consisting of Alder (*Alnus glutinosa*), beneath which can be found Alexanders (*Smyrnium olusatrum*), Cleavers (*Galium aparine*), Common Nettle, Hogweed, Lesser Celandine and Bramble.

Fethard Bridge

The proposed pipeline route runs across Fethard Bridge (Appendix 2, Plate 4), a historical stone structure over a small estuary. It can be categorised as BL1 Stone walls and other stonework. The parapets on either side support a well-developed plant community with Stonecrop (*Sedum* sp.),

Common Bird's-foot-trefoil (*Lotus corniculatus*), Polypody (*Polypodium* sp.), Ivy (*Hedera helix*), Silky Wall Feather-moss (*Homalothecium sericeum*) and Red Fescue (*Festuca rubra*).

There appears to be only a small opening beneath the bridge through which water can pass, this occurring near the southern end, and possibly this is controlled by a sluice. The estuary on both sides of the bridge can be categorised as CW2 Tidal rivers.

East of bridge

To the east of the bridge the water appears to be quite saline. The estuary is dominated by an expanse of CM1 Lower salt marsh vegetation with a well-developed creek system (Appendix 2, Plate 5). The majority of the saltmarsh is composed of beds of the non-native Common Cord-grass (*Spartina anglica*), an invasive species listed on the Third Schedule of S.I. 477/2011. There are, however, some fringing areas on the north side that constitute Annex I habitat 1330 Atlantic salt meadows. This habitat consists of two vegetation communities, one dominated by Sea-purslane (*Atriplex portulacoides*) and the other by Common Saltmarsh-grass (*Puccinellia maritima*). Sea Plantain (*Plantago maritima*) and Sea Arrowgrass (*Triglochin maritimum*) also occurs here. The habitat is only 2 m across in some places, but is more extensive further north in the area surrounding the existing outfall pipe. The location of the current outflow pipe was visited and at the time of survey no evidence of eutrophication was apparent and the discharging water was odourless.

Close to the bridge are some unvegetated areas of LS4 Mud shores. These could be considered under the broad Annex I habitat 1130 Estuaries; however, to remain consistent with the mapping of Annex I habitats in NPWS's Site-specific Conservation Objectives for the Bannow Bay SAC, the same Annex I habitat assignment as in NPWS (2012a) is used for this report, i.e., Annex I habitat 1140 Mudflats and sandflats.

Behind the saltmarsh proper, a band of Common Couch (*Elytrigia repens*) occurs in places. Below the parapet of the bridge, Sea Beet (*Beta vulgaris*) and English Scurvygrass (*Cochlearia anglica*) were found. Animal paths were observed along the edge of the saltmarsh on the northern side below the scrub which are likely to belong to the Annex II species Otter (*Lutra lutra*). It is possible that Otter use the scrub to the north of the saltmarsh as a resting place. A Little Egret (*Egretta garzetta*) was observed in the marsh.

West of bridge

To the west of the bridge (Appendix 2, Plate 6), the water appears to be more freshwater in character, but is still tidally influenced. Mute Swan (*Cygnus olor*) and Mallard (*Anas platyrhynchos*) were observed here. On the northern bank are a small Wexford County Council depot (BL3 Buildings and artificial surfaces, ED2 Spoil and bare ground) and an area of rank CM2 Upper salt marsh. The sward is largely Common Couch, but also found in the grassland were False oat-grass (*Arrhenatherum elatius*), Hogweed, Common Nettle, Broad-leaved Dock, Bramble and Hard Rush (*Juncus inflexus*).

Road (R734)

To the south of the bridge, the proposed pipeline route runs along the R734 road up the hill. The road can be divided into two sections. The first section of road lies between the bridge and the turning on the east side for the quay (Appendix 2, Plate 7). On the western side of this road section is a length of WL2 Treelines dominated by non-native species including New Zealand Broadleaf (*Griselinia littoralis*). Behind this lies the Fethard RNLI Station (BL3 Buildings and artificial surfaces, GA2 Amenity grassland (improved)). On the eastern side of the road is a tall, steep bank surmounted by a WL1 Hedgerow of Bramble and Blackthorn. The shady bank here supports an array of woodland species including Honeysuckle (*Lonicera periclymenum*), Lords-and-ladies (*Arum maculatum*), Greater Stitchwort (*Stellaria holostea*), Cleavers, Ivy, Herb Robert (*Geranium robertianum*), Soft

Shield-fern (*Polystichum setiferum*), False Brome (*Brachypodium sylvaticum*) and Common Nettle. Behind the hedge lies a field of GA1 Improved agricultural grassland.

The second section of road runs from after the turning for the quay southwards to the point where the pipeline route turns off to the east down a farm lane (Appendix 2, Plate 8). On the western side of the road here is a series of houses and gardens (BL3 Buildings and artificial surfaces, GA2 Amenity grassland (improved)), lying behind WL1 Hedgerows and WL2 Treelines. Between two of the houses is a small area of GS2 Dry meadows and grassy verges and WS1 Scrub. On the eastern side of the road is a low WL1 Hedgerow of Blackthorn and Bramble, behind which is a large ploughed arable field (BC1 Arable crops). Also along this section of road can be found: Ash (*Fraxinus excelsior*), Privet (*Ligustrum* sp.), Ivy, Lords-and-ladies, Primrose (*Primula vulgaris*), Red Fescue, Hogweed and Common Nettle. Near to one of the first houses in this section the invasive non-native Montbretia (*Crocosmia aurea* × *C. pottsii*) is growing next to a hedge. At the junction with the farm lane at the other end of this section, the invasive non-native Three-cornered Leek (*Allium triquetrum*) is growing at the side of the road.

2.7.2 Fieldwork conclusions

Of the 14 Fossitt (2000) habitats recorded within the proposed project site, the Lower salt marsh (CM1) and Mud shores (LS4) habitats are of the highest conservation value as they correspond to the Annex I habitats 1330 Atlantic salt meadows and 1140 Mudflats and sandflats respectively.

Alien invasive species were recorded that could have an impact on Natura 2000 sites and their Qualifying Interests if they are inadvertently spread during the proposed project. In particular, Common Cord-grass and Three-cornered Leek were recorded along the pipeline route (locations shown in Appendix 3). These species are listed on the Third Schedule of S.I. No. 477/2011, the European Communities (Birds and Natural Habitats) Regulations, and are invasive species with restrictions placed on their movement. Invasive species are discussed in more detail in an invasive species report for the Fethard sewerage scheme (O'Neill 2016).

3 Consultation

Consultation with the National Parks and Wildlife Service (NPWS) was carried out in relation to this project. The Development Applications Unit was emailed on the 21st April 2016 regarding the proposed development. A comprehensive response was received dated 2nd June 2016. The response is summarised below and given in full in Appendix 5.

Development Applications Unit – Ms Yvonne Nolan

The response from the DAU highlighted the presence of the protected plant Perennial Glasswort (*Arthrocnemum perenne*) in the vicinity of the proposed development and requested a survey for the species, noting that this may also require application for a licence from NPWS and a request for any pertinent data from NPWS. The DAU also noted that the development is adjacent to a peregrine falcon nest site and that the impact on these birds needs to be assessed.

Documents to be used as guidance when carrying out Appropriate Assessments were listed, and the requirement to consult the published Conservation Objectives for any Natura 2000 sites affected was noted.

Regarding cumulative and *ex situ* impacts, the consideration of all Natura 2000 sites within a distance of 15 km was noted, expanding this radius as required, e.g., to take hydrological connectivity or bird flight paths into account. The DAU's communication also highlighted the need to ensure that no terrestrial or aquatic invasive species are used during landscaping which could impact negatively on Natura 2000 sites.

The DAU's response noted the need to provide complete project details including construction management plans (CMPs) to allow an adequate appropriate assessment to be undertaken. , stating that, if applicants are not in a position to decide the exact location and details of these at time of application, the range of options that may be used should be considered in the assessment. The CMP should also include methods to ensure invasive alien species are not introduced or spread.

The requirement of licences from NPWS was highlighted where there are impacts on protected species (e.g., bats, otters, badgers, protected plants) and their habitats, resting or breeding places (e.g., birds' nests), applications for which should be submitted to NPWS in advance of planning to avoid delays and in case project modifications are necessary. The DAU recommended that, where such survey work takes place well before construction commences, an ecological survey of the development site should take place immediately prior to construction to ensure that no significant change since the baseline survey; there may be a need for new licence applications for protected species at this stage if a licence has expired.

Previous consultation

Previous consultation was carried out with relation to the proposed development for the Appropriate Assessment Screening. The results of this consultation are reproduced below directly from Byrne Looby Partners (2013).

> **List of Agencies Consulted**
> During the site selection stage of the Fethard on Sea Main Drainage Scheme, which encompasses the waste Water treatment works and associated outfall, the following agencies were consulted in terms of the suitability of sites for the treatment plant.
>
> - Development Applications Unit – Mr. Anthony Byrne
> - Marine Licence Vetting Committee – Ms. Geraldine Farrell
> - Southern Regional Fisheries Board – Mr. David McInerney
>
> Under instructions from the Marine Vetting Committee, a separate Appropriate Assessment is being carried out for this outfall development. A foreshore licence will be applied for, for the outfall development. A Part 8 Planning process will be followed in relation to the Waste Water Treatment Works.
>
> **Response to Consultation**
> Responses from the Marine Licence Vetting Committee and Southern Regional Fisheries Board responses relate to the outfall development. The following is a summary of the response received from the Development Applications Unit which relate to the waste water treatment plant.
>
> **Development Applications Unit – Mr. Anthony Byrne**
> During the site selection stage, Mr. Anthony Byrne requested a habitat and species survey for the proposed WWTP sites. The impact of the proposed waste water treatment plant on the natural heritage and biodiversity was assessment subsequently by Roger Goodwillie in 2007 in terms of any possible impacts on the designated sites. In particular, the impact of the development was assessed on species protected under the Wildlife acts and species listed on Annex II of the Habitats Directive. The ecological survey of each site included a vegetation survey to identify any rare or protected plants. A bat and badger survey to identify any setts or bat roost was carried out.
> An ecological survey was conducted by Moore Group on the 28th October 2011. The field in which the pumping station and storage tank is to be constructed was surveyed and Fethard Bridge was examined for bat roosting potential (Annex II species).

4 Natura 2000 Sites

4.1 Natura 2000 Sites Qualifying Interests and Conservation Objectives

The proposed development site overlaps with the Bannow Bay SAC and Bannow Bay SPA (boundary map shown in Appendix 4). The Qualifying Interests of these two Natura 2000 sites (NPWS 2012a, 2012b), along with the overall National Conservation Assessment (NPWS 2013), are presented in Tables 2 and 3 respectively. The Conservation Objectives of the sites are then discussed.

Table 2. Qualifying Interests for the Bannow Bay SAC (000697) with overall National Conservation Assessment (NPWS 2012a, 2013).

Code	Qualifying Interest	National Conservation Assessment
1130	Estuaries	Inadequate (improving)
1140	Mudflats and sandflats not covered by seawater at low tide	Inadequate (improving)
1210	Annual vegetation of drift lines	Inadequate (declining)
1220	Perennial vegetation of stony banks	Inadequate (stable)
1310	*Salicornia* and other annuals colonising mud and sand	Inadequate (declining)
1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Inadequate (stable)
1410	Mediterranean salt meadows (*Juncetalia maritimi*)	Inadequate (stable)
1420	Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)	Bad (declining)
2110	Embryonic shifting dunes	Inadequate (stable)
2120	Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	Inadequate (stable)
*2130	*Fixed coastal dunes with herbaceous vegetation (grey dunes)	Bad (stable)

* signifies a priority habitat

Table 3. Qualifying Interests and population statistics for the Bannow Bay SPA (004033) (Modified from NPWS 2012b, 2012c).

Code	Qualifying Interest	Site Conservation Condition	BoCCI Category[a]	Site Population Trend	Current all-Ireland Trend[b]
A046	Light-bellied Brent Goose (*Branta bernicla*)	Intermediate (Unfavourable)	Amber	- 6.99	+ 58
A149	Dunlin (*Calidris alpina*)	Highly Unfavourable	Red	- 75.7	- 46.5
A156	Black-tailed Godwit (*Limosa limosa*)	Favourable	Amber	+ 27.2	+ 70.2
A157	Bar-tailed Godwit (*Limosa lapponica*)	Favourable	Amber	+ 10.1	+ 1.5
A048	Shelduck (*Tadorna tadorna*)	Highly Unfavourable	Amber	- 52.6	+ 4.46
A054	Pintail (*Anas acuta*)	n/c	Red	n/c	+ 26.8
A130	Oystercatcher (*Haematopus ostralegus*)	Favourable	Amber	+ 0.4	+ 23.5
A140	Golden Plover (*Pluvialis apricaria*)	Intermediate (Unfavourable)	Red	- 2.6	- 2.2
A141	Grey Plover (*Pluvialis squatarola*)	Highly Unfavourable	Amber	- 72.1	- 33.1
A142	Lapwing (*Vanellus vanellus*)	Intermediate (Unfavourable)	Red	- 3.0	- 40.12
A143	Knot (*Calidris canutus*)	Highly Unfavourable	Amber	- 53.0	- 2.91
A160	Curlew (*Numenius arquata*)	Intermediate (Unfavourable)	Red	- 17.3	- 25.7
A162	Redshank (*Tringa totanus*)	Intermediate (Unfavourable)	Red	- 4.6	+ 22.7

n/c = not calculated
[a] Birds of Conservation Concern in Ireland. After Colhoun & Cummins (2013)
[b] all-Ireland trend calculated for period 1994/95 to 2008/09

NPWS (2012a) describes the Conservation Objectives of Natura 2000 sites as follows:

"A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- *its natural range, and area it covers within that range, are stable or increasing, and*
- *the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and*
- *the conservation status of its typical species is favourable.*

The favourable conservation status of a species is achieved when:

- *population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*
- *the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and*

- *there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."*

Site-specific Conservation Objectives are available for the Qualifying Interests of the Bannow Bay SAC (NPWS 2012a) and Bannow Bay SPA (NPWS 2012b), together with supporting documents that give specific information on the sites, such as population numbers and trends for the species designated as Qualifying Interests for the SPA (NPWS 2012c).

4.2 Connectivity between proposed project and Qualifying Interests

It is important to establish whether there is a pathway between the proposed project and the Natura 2000 sites' Qualifying Interests. If there is no pathway (direct or otherwise), an impact cannot occur. If the potential for an impact is thought to exist, the severity of the impact and mitigation measures will be addressed further in Section 5.

4.2.1 Bannow Bay SAC (000697)

Bannow Bay SAC's Qualifying Interests, which are all Annex I habitats, are mapped in the Site-specific Conservation Objectives document (NPWS 2012a). Table 4 below lists the Qualifying Interests of the SAC, their connectivity with the proposed development, and the likelihood of a significant impact occurring.

Table 4. Potential for impact on Qualifying Interests (QIs) based on their location in relation to the proposed development; information on location of QIs is from NPWS (2012a).

Code	Qualifying Interest	Location	Impact
1130	Estuaries	9 km upstream of proposed development	Not significant
1140	Mudflats and sandflats not covered by seawater at low tide	Within footprint of proposed development	Potential for impact exists
1210	Annual vegetation of drift lines	2 km upstream of proposed development	Not significant
1220	Perennial vegetation of stony banks	2 km upstream of proposed development	Not significant
1310	*Salicornia* and other annuals colonising mud and sand	Within 75m of proposed development	Potential for impact exists
1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Within footprint of proposed development	Potential for impact exists
1410	Mediterranean salt meadows (*Juncetalia maritimi*)	2 km upstream of proposed development	Not significant
1420	Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)	Within 75 m of proposed development	Potential for impact exists
2110	Embryonic shifting dunes	2 km upstream of proposed development	Not significant
2120	Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	2 km upstream of proposed development	Not significant
*2130	*Fixed coastal dunes with herbaceous vegetation (grey dunes)	2 km upstream of proposed development	Not significant

From this table, it is evident that the habitats most at risk of impact from the proposed development (northern section) are 1140 Mudflats and sandflats and 1330 Atlantic salt meadows, both of which occur within the footprint of the proposed works, and 1310 *Salicornia* and other annuals colonising

mud and sand (hereafter 1310 *Salicornia* mud) and 1420 Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) (hereafter 1420 Halophilous scrub), which are hydrologically linked to the works at the storm overflow via the creek systems of the saltmarsh and mudflat habitats. Halophilous scrub is of additional importance as it is characterised by the presence of the legally protected (Flora (Protection) Order, 1999) and Red Data Book-listed plant Perennial Glasswort (*Arthrocnemum perenne*), which occurs in only a few sites in the country (NPWS 2014).

A summary of the Conservation Objectives for the Bannow Bay SAC as they relate to the above four Annex I habitats is given in Tables 5 and 6 below.

Table 5. Summary Conservation Objectives for 1140 Mudflats and sandflats within the Bannow Bay SAC.

Overall objective: To maintain the favourable conservation condition of 1140 Mudflats and sandflats in Bannow Bay SAC, which is defined by the following list of attributes and targets:	
Attribute	**Target**
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes
Community distribution	Maintain the extent of the *Zostera*-dominated and the *Barnea candida* communities, subject to natural processes.
Zostera shoot density	Conserve the high quality of the *Zostera*-dominated community, subject to natural processes
Barnea candida density	Conserve the high quality of the *Barnea candida* community, subject to natural processes
Community distribution	Conserve the following community complexes in a natural condition: Fine sands with *Pygospio elegans* and *Corophium volutator* community complex; and Intertidal sand dominated by polychaetes community complex.

Table 6. Summary Conservation Objectives for Annex I saltmarsh habitats 1310 *Salicornia* mud, 1330 Atlantic salt meadows and 1420 Halophilous scrub within the Bannow Bay SAC.

Overall objective: To restore the favourable conservation condition of 1310 *Salicornia* mud, 1330 Atlantic salt meadows and 1420 Halophilous scrub in Bannow Bay SAC, which is defined by the following list of attributes and targets:		
Attribute		**Target**
Habitat area		Area increasing, subject to natural processes, including erosion and succession
Habitat distribution		No decline, or change in habitat distribution, subject to natural processes
Physical structure:	Sediment supply	Maintain natural circulation of sediments and organic matter, without any physical obstructions
	Creeks and pans	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession
	Flooding regime	Maintain natural tidal regime
Vegetation structure:	Zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
	Vegetation height	Maintain structural variation within sward
	Vegetation cover	Maintain more than 90% of area outside creeks vegetated
	Negative indicator species: *Spartina anglica*	No significant expansion of Common Cord-grass (*Spartina anglica*), with an annual spread of less than 1%
Vegetation composition: typical species & sub-communities		• Maintain the presence of species-poor communities with typical species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009) [1310 only] • Maintain range of sub-communities with typical species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009) [1330 and 1420]

4.2.2 Bannow Bay SPA (004033)

The distribution and population numbers of the thirteen bird species listed as Qualifying Interests vary from one part of the SPA to the other. The area of the SPA in which the proposed development is located is referred to in NPWS (2012c) as subsite 0O489 Pollfur. Nine of the thirteen Qualifying Interest species (see Table 9 below) have been recorded within this subsite (data from 2010; NPWS 2012c) and it is likely that the remaining species would also use the area on occasion. Therefore these species may potentially be impacted by the proposed development, primarily through disturbance during the construction period.

The 'wetlands habitat' used by these birds is also listed as a Qualifying Interest for Bannow Bay SPA. In the vicinity of the proposed development this would include the saltmarsh and mudflat habitats.

A summary of the Conservation Objectives for the Bannow Bay SPA as they relate to the thirteen Qualifying Interest bird species and the wetlands habitat is given in Table 7 below.

Table 7. Summary Conservation objectives for the Bannow Bay SPA.

Objective 1: To maintain the favourable conservation condition of each of the 13 Qualifying Interest bird species in Bannow Bay SPA, which is defined by the following list of attributes and targets:	
Attribute	**Target**
Population trend	Long term population trend stable or increasing
Distribution	There should be no significant decrease in the range, timing or intensity of use of areas by Qualifying Interest bird species, other than that occurring from natural patterns of variation
Objective 2: To maintain the favourable conservation condition of the wetland habitat in Bannow Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. This is defined by the following attribute and target:	
Attribute	**Target**
Wetland habitat area	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1,364ha, other than that occurring from natural patterns of variation

5 Assessment of effects

Potential impacts on Natura 2000 sites from the proposed project will now be discussed.

5.1 Impacts on habitats

Impacts on habitats can occur through factors such as pollution, disturbance, soil compaction, alterations of hydrological regime, and replacement of habitats with artificial surfaces such as concrete. The habitats most vulnerable to impacts are the four Annex I habitats within or adjacent to the footprint of the proposed works, i.e., 1140 Mudflats and sandflats, 1310 *Salicornia* mud, 1330 Atlantic salt meadows and 1420 Halophilous scrub.

5.1.1 Loss of habitats

The new collector main and pumping station is to be constructed at the site of the existing primary treatment tank at Tay Lane, beside Fethard Estuary. As such, these new structures will be constructed on existing built land or improved amenity grassland and will not result in direct loss of any Annex I habitat.

The new storm overflow associated with the proposed pumping station will discharge at the same point as the existing primary outfall. However, unlike the existing outfall pipe, which is on the surface of the saltmarsh, the new overflow will be buried under Annex I 1330 Atlantic salt meadows and 1140 Mudflat and sandflat habitats for a length of approximately 70 m. This will result in temporary loss of,

and severe disturbance to the habitats during the construction phase. Loss of Qualifying Interest Annex I habitats is contrary to the Conservation Objectives for the Bannow Bay SAC (Tables 5 and 6). Measures to mitigate damage to the habitats caused by these works are described below in Section 6.

The new pipeline will run along the road. This NIS has been prepared on the understanding that all construction machinery will access the pipeline route from the road, that there will be no direct impacts from movement of machinery or personnel on the Annex I saltmarsh and mudflat habitats in the vicinity of the bridge, and that the existing flow regime beneath the bridge will be retained. As such, there is no expected loss of any Annex I habitat in the vicinity of the bridge.

5.1.2 Damage to habitats

Decommissioning of the existing primary treatment tank and primary outfall could result in the release of pollutants held within the system. If untreated effluent from the old system were to enter the nearby wetlands it would have the potential to negatively affect the adjacent Annex I saltmarsh and mudflat habitats by eutrophication, which could alter the vegetation and invertebrate communities that occupy the habitats or could promote spread of the invasive Common Cord-grass, both of which are contrary to the Conservation Objectives for the Bannow Bay SAC. Mitigation measures to reduce these impacts are discussed in Section 6.

Operation of the storm overflow also poses a potential threat to the receiving habitats. The proposed overflow will discharge to the same point as the existing primary outfall, a stream that runs to Fethard Estuary. This stream is one of the creeks of the saltmarsh system, and forms an integral part of the saltmarsh and mudflat habitats, both structurally and hydrologically. As such, any degradation in the quality of water entering this stream could have an effect on the Annex I habitats fed by this water source, i.e., 1140 Mudflats and sandflats, 1310 *Salicornia* mud, 1330 Atlantic salt meadows and 1420 Halophilous scrub, either by changing the composition of the native vegetation communities or by promoting the spread of the non-native Common Cord-grass, which are contrary to the Conservation Objectives of the Bannow Bay SAC. While the quality of the discharge water from the overflow is expected to be an improvement on the existing outfall, no data currently exist to support this and the mitigation measures specified in Section 6 should be taken to minimise the risk of impacts on the Annex I saltmarsh and mudflat habitats from the storm overflow.

Impacts on protected habitats may occur as a result of disturbance and spread of alien invasive species caused by construction. In the section of the proposed scheme covered by this NIS, the habitats most at risk from this impact are the Annex I habitats 1140 Mudflats and sandflats, 1310 *Salicornia* mud, 1330 Atlantic salt meadows and 1420 Halophilous scrub, where the invasive *Spartina anglica* is found. There is some discussion of invasive species below in Section 6, and a more detailed discussion is found in the invasive species report for the Fethard sewerage scheme (O'Neill 2016).

5.2 Impacts on species

No species are listed as Qualifying Interests for the Bannow Bay SAC.

Thirteen bird species are listed as Qualifying Interests for the Bannow Bay SPA; wetlands are also listed as they comprise the main habitat for these species. Of the thirteen species, nine have been recently (2010) recorded in the vicinity of the proposed works (NPWS 2012c). In particular, works to construct the new storm overflow are likely to cause significant disturbance to the Qualifying Interest bird species and their saltmarsh habitat. Measures to mitigate this disturbance are outlined below in Section 6.

Noise and the possible use of additional lighting during the construction phase of the project could disturb bird species listed as Qualifying Interests for the Bannow Bay SPA. However, the measures

listed below in Section 6 should reduce any disturbance to the species due to noise. It should also be taken into account that any disturbance from the construction phase of the proposed project will be temporary in nature and limited to a small corner of what is an expansive SPA.

Signs of Otter were noted during the field survey. Although not a Qualifying Interest for Bannow Bay SAC, Otter is an Annex II species and is strictly protected under Annex IV. Otter could potentially be disturbed, for example, during scrub clearance for the laying of the new storm overflow. Mitigation measures to reduce or avoid disturbance to this species are detailed below in Section 6.

5.3 General impacts on water quality

It is expected that water quality of the outfall discharge to the stream that flows into Fethard Estuary will improve as a result of the proposed sewerage scheme (but see Section 6.4 regarding further monitoring).

Any construction activities have the potential to release suspended solids and chemical pollutants into watercourses, which could impact negatively on water quality. Any impacts to surface water due to this proposed project are expected to be small and temporary in nature, with preventative measures, such as those described in Section 6 below, taken to reduce any negative impacts.

The release of sediment from earth works across the survey area poses a potential risk to the saltmarsh and mudflats of the Bannow Bay SAC and the wetlands of the Bannow Bay SPA. There is, therefore, potential for negative impacts on both of these Natura 2000 sites. High levels of suspended solids can clog fish gills, reduce visibility for feeding fish, and smother invertebrates, all of which may impact on waterfowl feeding on these food resources.

Given the limited footprint of the earthworks and the fact that they will, wherever possible, be undertaken in the dry, there will be limited possibility for the release of high levels of sediment. Coupled with this fact, the mudflats and sandflats of Bannow Bay are sedimentary habitats by definition, and so the species present are adapted to such conditions, which will mean that there will be no adverse effect on the habitat, the species present within it or feeding upon it, caused by sedimentation.

5.4 Cumulative impacts

When assessing cumulative impacts or in-combination effects it is necessary to consider the effect of other plans and projects that, together with the current project, could have a cumulative impact on Natura 2000 sites.

Works on the southeastern section of the Fethard-On-Sea sewerage scheme (see separate NIS, O'Neill & Perrin 2016) will be taken into account at this stage as they will be taking place simultaneously with works on the northern section.

Works on the southeastern section will involve construction of a pipeline through farmland, construction of a new WwTP, and direct drilling through rock to create a new marine outfall in Hook Head SAC. The main issues that are relevant in terms of cumulative impacts with the current project are disturbance and emissions. To reduce the duration of impacts, both sections of the project (northern and southeastern) should be worked on simultaneously. To reduce the effects of emissions, the measures described below in Section 6 and in O'Neill & Perrin (2016) should be taken to mitigate any negative impacts to species and habitats in the local vicinity. Because the incidence of the alien invasive species Three-cornered Leek is higher in the southeastern section of the proposed development, particular care should be taken to avoid the transfer of bulbs and seedlings of the plant from the southeastern section to the northern section. Further information can be found in the invasive species report for the Fethard sewerage scheme (O'Neill 2016).

Other plans and projects specific to the two Natura 2000 sites listed above are:

- Draft Wexford County Development Plan 2013-2019 (Wexford County Council 2012)
- County Wexford Draft Biodiversity Action Plan 2012-2017 (Wexford County Council 2011)
- Ballyteigue Bannow Water Management Unit Action Plan (SERBD 2010)
- Individual planning applications in the local area

The Draft Wexford County Development Plan 2013-2019 contains many policies and objectives aimed at protecting the natural environment, including Natura 2000 sites. These include:

- Water Supply Objective WS03 'To ensure that all proposed future public water abstractions within the plan area are screened for Appropriate Assessment of its potential impact on the Natura 2000 network, in accordance with Article 6 of the Habitats Directive'.
- Heritage Objective HT03 'To ensure that development proposals do not have an unacceptable impact on our heritage unless there is a reason of over-riding public interest for such development'.
- Natural Heritage Objective NH01 'To conserve and protect the integrity of sites designated for their habitat/wildlife or geological/geomorphological importance and prohibit development which would damage or threaten the integrity of these sites, including SACs, cSAC, SPAs, NHAs, pNHAs, Nature Reserves, and Refuges for Fauna'.

The Ballyteigue Bannow Water Management Unit Action Plan states that the Fethard-On-Sea WwTP is considered 'At Risk' and it should be investigated as to whether its capacity needs to be increased, though this was considered the lowest of the three priority levels.

A search for Planning Applications on the Wexford County Council Map Viewer (https://maps.wexford.ie/imaps/ accessed 20th April 2016) showed 55 planning applications submitted in the last five years in the locality of the proposed project. Most were in relation to new residences or residential extensions, with associated ancillary works including sewage treatment. A selection of relevant planning applications submitted within the last five years within the vicinity of the components of the Fethard WwTP are:

Grange, Fethard, 2016: Permission for erection of fully serviced two-storey dwelling with treatment plant together with all associated and ancillary site works.

Fethard, 2015: Permission for permanent retention and completion of a granny flat and also for permission to upgrade the existing sewage treatment system.

Fethard, 2014: Upgrade existing effluent treatment system including the removal of the discharge to surface waters pipework from that previously approved under previous planning registration number.

Poulfur, Fethard, 2013: Permission for works associated with construction of new primary school, including construction of new waste water treatment system, percolation area and surface water attenuation tank on the adjoining lands and all associated site works.

Ramstown, Fethard, 2012: Construction of a single-storey extension to a dwelling house and the construction of a domestic effluent treatment plant and other ancillary works.

Overall, no specific pathway has been identified by which any of the plans and projects identified would have a significant negative in-combination effect on the Natura 2000 sites Bannow Bay SAC or Bannow Bay SPA, provided best practice is followed in all cases to deal with construction dust, noise and emissions, and post-construction to ensure that all waste water quality meets or exceeds acceptable standards.

6 Mitigation measures

6.1 Mitigation of impacts on Qualifying Interest habitats

Burial of the storm overflow from the pumping station under the saltmarsh and mudflats has the potential to cause severe disturbance to, and even loss of, saltmarsh and mudflat habitat. To minimise impacts on these Annex I habitats and to expedite recovery of the habitats following construction the following mitigation measures are proposed:

- Access to the storm outflow pipeline route by machinery and workers will be limited to the construction wayleave which will be strictly limited to 5m.
- Turfs will be removed from the pipeline route prior to excavation and stored. They will then be replaced once the pipeline has been installed. The duration of storage of the turfs will be kept to a minimum and care will be taken to ensure they do not dry out during periods of dry weather.
- Excavated material will be stored on a geotextile membrane during construction of the pipeline to assist recovery of buried plants.
- The pipeline route will be returned to the current ground levels to avoid pooling of water (if it is left too low), or colonisation by non-saltmarsh species and loss of saltmarsh habitat (if it is too high).
- If additional fill is required, washed sand or fine gravel (5-10 mm) will be used in preference to soil and this will be added as deep within the excavation as possible.
- Works will be timed to avoid spring tides when excavations could be inundated by high tides.
- Machinery used on saltmarsh will have low ground pressure to reduce compaction, will be maintained to a high standard to avoid oil spills, and will be re-fuelled away from the saltmarsh in a bunded area.
- Considering the sensitive nature of the habitat here and the location of the works, construction of the storm overflow pipe should be conducted in consultation with and overseen by an Ecologist who has knowledge and experience of saltmarsh habitats and who can provide a toolbox talk for contractors to make them aware of potential issues and ensure habitats are not negatively impacted by the works.
- Appropriate biosecurity measures will be implemented to ensure that the invasive species identified in the vicinity of the site (O'Neill 2016) are not spread or transported. These measures may be limited to marking off invasive species to prevent entry by workers or vehicles, or may require the use of geotextiles or washing down of vehicles to prevent the spread of such plants.

To further maintain the quality of the habitats the current flow regime beneath the bridge will be maintained during and post construction to ensure that there are no negative effects on the mudflats (e.g., by erosion) or on the saltmarsh habitats (e.g., by alteration of sediment supply and flooding regime), as required by the Conservation Objectives of the Bannow Bay SAC.

This AA has been prepared on the understanding that in the vicinity of the bridge all construction machinery will access the pipeline route from the road and that there will be no direct impacts from movement of machinery or personnel on the Annex I habitats either side of the bridge. As such there is no expected loss of any Annex I habitat in the vicinity of the bridge.

6.2 Mitigation of impacts on Qualifying Interest species

As well as impacting on the habitats used by birds listed as Qualifying Interests for the Bannow Bay SPA, all construction works, and in particular the storm overflow pipeline, have the potential to cause

direct disturbance to over-wintering birds. To minimise disturbance, works on the saltmarsh and mudflats will be conducted during the summer months (April-September) to minimise the potential for disturbing over-wintering wading birds.

6.3 Mitigation of impacts on other species

Clearance of scrub between the pumping station and the storm overflow pipeline will be conducted outside the bird-breeding season of 1st March to 31st August to minimise disturbance to nesting birds, as required under Section 40 of the Wildlife Acts 1976 to 2012 (while Section 40 does not apply in relation to site clearance for site preparation works, birds' nests remain protected).

Otter, while not listed as a qualifying interest for Bannow Bay SAC, is nonetheless an Annex II species and care should be taken not to disturb any otter in the vicinity of the proposed development. Scrub will be checked for otter resting places or holts by an ecologist prior to clearance.

Works will be kept to the minimum required, and will be completed as quickly as practicable to minimise disturbance to birds and animals.

6.4 Mitigation of impacts on water quality during construction

During the construction of the proposed sewerage scheme all necessary precautions will be taken to prevent the pollution or silting of rivers, streams, watercourses, surface water drains or wetland habitats. Standard measures should be implemented to minimise the release of sediment from the construction site into the surrounding wetland. With the implementation of the measures described below, it is considered that there is no likelihood of an adverse impact from the construction of the proposed project on the Bannow Bay SAC or SPA from the generation of silt.

There is a risk of a hydrocarbon spill from the operation of plant, machinery and vehicles during the construction of the proposed project. Hydrocarbons and heavy metals can have toxic effects on aquatic organisms. The measures listed below should be implemented so that the likelihood of an impact on water quality from a release of pollutants during the construction phase of the proposed project is reduced and there will be no adverse effect on the Bannow Bay SAC or SPA.

- Surface water run-off will be directed into appropriately designed silt traps prior to discharge to surface waters.
- Fuels, oils, greases and hydraulic fluids will be stored in bunded compounds well away from waterbodies and watercourses, and such compounds will not be located within any Natura 2000 site.
- Maintenance and refuelling of plant and machinery will take place in a bunded area or off site.
- All plant and machinery will be well maintained and regularly checked for leaks.
- Spill kits and staff trained in their use will be available to deal with any incident on site during the operation of the proposed development.
- Stockpile areas for sands and gravel will be kept to minimum size, well away from any waterbodies or watercourses.
- Construction works, especially ones involving the pouring of concrete, will be conducted in the dry.

Decommissioning of the existing primary treatment tank and primary outfall could result in the release of pollutants held within the system. Best practice will be followed to ensure that all effluent remaining in the system at decommissioning is dealt with safely, with no release to the environment.

As the proposed development occurs adjacent to a waterbody, the guidance published by the Eastern Regional Fisheries Board (now Inland Fisheries Ireland) should be consulted in relation to protecting water quality during construction (IFI 2016).

6.5 Mitigation of impacts on water quality during operation

The wastewater discharge licence is issued with conditions that relate to the operation of storm overflows for the Fethard sewerage scheme. These conditions must be met for the WwTP to operate within the terms of the licence. The relevant section of text from the discharge licence that pertains to storm water outflows is reproduced below:

> 4.11.1 The licensee shall, prior to the date for submission of the second AER [Annual Environmental Report] (required under Condition 6.8), carry out an investigation for the identification and assessment of storm water overflows. A report on the storm water overflows shall be submitted to the Agency as part of the second AER. All storm water overflows shall be in compliance with the criteria for storm water overflows, as set out in the DoECLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995 and any other guidance as may be specified by the Agency.
>
> 4.11.2 The licensee shall carry out an assessment of storm water overflows at least once every three years thereafter and report to the Agency on each occasion as part of the AER. The assessment shall include a determination of compliance with the criteria for storm water overflows, as set out in the DoECLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995 and any other guidance as may be specified by the Agency. The licensee shall maintain a written record of all assessments and remedial measures arising from the assessment.

6.6 Monitoring

Monitoring of the discharge from the storm overflow will be carried out according to the terms of the Wastewater Discharge Licence D0241-01 to ensure no deleterious substances are present at a level that could impact negatively on the water quality of the saltmarsh habitats.

6.7 General mitigation measures

6.7.1 Disposal of spoil and waste

All excavated surplus, unsuitable or waste materials will be transported off site for disposal, except for material that has been excavated from an Annex I habitat (see above). A licensed waste facility will be used for disposal and all relevant licences, permits and permissions required for the use of the licensed dump sites obtained. Vehicles used for the transport of waste material will also have the appropriate permits. Bituminous materials or other spoil contaminated with Polycyclic Aromatic Hydrocarbons (PAHs) will only be disposed of at an appropriately licensed facility.

6.7.2 Dust and noise control

During the works, Best Practicable Means shall be employed to minimise air-blown dust being emitted from the site. This includes covering skips and slack heaps, netting of scaffolding, daily washing down of pavements or other public areas, and any other precautions necessary to prevent dust nuisances.

Any works on the project site will be compliant with the contents and recommendations of British Standard 5228: Code of Practice for Noise Control on Construction and Demolition Sites, as well as the Safety, Health and Welfare at Work (General Application) Regulations 2007. All plant used during the works will be the quietest of its type available for carrying out the work required and will be maintained in good condition with regard to minimising noise output.

7 Summary of assessment of potential impacts and mitigation measures required

Table 8 summarises the assessment of potential impacts on the Qualifying Interests listed for Bannow Bay SAC (000697) by the proposed works at Fethard. Table 9 summarises the assessment of potential impacts on the Qualifying Interests listed for Bannow Bay SPA (004033).

Table 8. Summary of the assessment of potential impacts on the non-marine Qualifying Interests (QIs) of the Bannow Bay SAC (00697) and Bannow Bay SPA (004033) by the proposed works at Fethard WwTP. *indicates a priority habitat.

Qualifying Interest	**Natura 2000** Section 4	**Potential for impacts**	**Potential impacts** Disturbance Section 2.4	Emissions (construction) Section 2.5	Emissions (operation) Section 2.6	**Cumulative impacts** Section 2.7	**Mitigation measures proposed with project** Sections 5, 6	**Conclusion**
Estuaries	SAC 000697	QI is 9km upstream of proposed works, negligible potential for impact	No potential impact	No potential impact	No potential impact	No significant cumulative negative impacts	Not required	No significant impact
Mudflats and sandflats not covered by seawater at low tide	SAC 000697	QI is adjacent to proposed works, high potential for impact	In SAC, disturbance of habitat while constructing storm overflow	Dust & spoil; effluent spill during tank decommissioning; increased transportation = possible oil spills, contribution to increased sedimentation	Discharge from storm overflow	No significant cumulative negative impacts	Agreed measures such as silt traps, use of bunded areas, etc.; mitigation work practices outlined in Section 6 for storm overflow construction; monitoring of storm overflow discharge	No significant impact
Annual vegetation of drift lines	SAC 000697	QI is 2km upstream of proposed works, low potential for impact?	No potential impact	No potential impact	No potential impact	No significant cumulative negative impacts	Not required	No significant impact
Perennial vegetation of stony banks	SAC 000697	QI is 2km upstream of proposed works, low potential for impact?	No potential impact	No potential impact	No potential impact	No significant cumulative negative impacts	Not required	No significant impact
Salicornia and other annuals colonising mud and sand	SAC 000697	QI is within 75 m of proposed works, high potential for impact	No potential impact	Dust & spoil; effluent spill during tank decommissioning; increased transportation = possible oil spills, contribution to increased sedimentation	Discharge from storm overflow	No significant cumulative negative impacts	Agreed measures such as silt traps, use of bunded areas, etc.; monitoring of storm overflow discharge	No significant impact
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	SAC 000697	QI is present on site of proposed works, high potential for impact	In SAC, disturbance of habitat while constructing storm overflow	Dust & spoil; effluent spill during tank decommissioning; increased transportation = possible oil spills, contribution to increased sedimentation	Discharge from storm overflow	No significant cumulative negative impacts	Agreed measures such as silt traps, use of bunded areas, etc.; mitigation work practices outlined in Section 6 for storm overflow construction; monitoring of storm overflow discharge	No significant impact

Qualifying Interest	Natura 2000	Potential for impacts	Potential impacts			Cumulative impacts	Mitigation measures proposed with project	Conclusion
	Section 4		Disturbance Section 2.4	Emissions (construction) Section 2.5	Emissions (operation) Section 2.6	Section 2.7	Sections 5, 6	
Mediterranean salt meadows (*Juncetalia maritimi*)	SAC 000697	QI is 2 km upstream of proposed works, low potential for impact?	No potential impact	No potential impact	No potential impact	No significant cumulative negative impacts	Not required	No significant impact
Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)	SAC 000697	QI is within 75 m of proposed works, high potential for impact	No potential impact	Dust & spoil; effluent spill during tank decommissioning; increased transportation = possible oil spills, contribution to increased sedimentation	Discharge from storm overflow	No significant cumulative negative impacts	Agreed measures such as silt traps, use of bunded areas, etc.; monitoring of storm overflow discharge.	No significant impact
Embryonic shifting dunes	SAC 000697	QI is 2 km upstream of proposed works, low potential for impact?	No potential impact	No potential impact	No potential impact	No significant cumulative negative impacts	Not required	No significant impact
Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	SAC 000697	QI is 2 km upstream of proposed works, low potential for impact?	No potential impact	No potential impact	No potential impact	No significant cumulative negative impacts	Not required	No significant impact
*Fixed coastal dunes with herbaceous vegetation (grey dunes)	SAC 000697	QI is 2 km upstream of proposed works, low potential for impact?	No potential impact	No potential impact	No potential impact	No significant cumulative negative impacts	Not required	No significant impact

Table 9. Summary of the assessment of potential impacts on the Qualifying Interests of the Bannow Bay SPA (004033) by the proposed works for the Fethard sewerage scheme (northern section).

Qualifying Interest	**Natura 2000**	**Potential for impacts**	**Potential impacts**			**Cumulative impacts**	**Mitigation measures proposed with project**	**Conclusion**
			Disturbance	Emissions (construction)	Emissions (operation)			
	Section 4		Section 2.4	Section 2.5	Section 2.6	Section 2.7	Sections 5, 6	
Light-bellied Brent Goose	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Shelduck	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Pintail	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Oystercatcher	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Golden Plover	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Grey Plover	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Lapwing	SPA 004033	Possible but not recorded from immediate vicinity of site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Knot	SPA 004033	Possible but not recorded from immediate vicinity of site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact

Qualifying Interest	Natura 2000	Potential for impacts	Potential impacts			Cumulative impacts	Mitigation measures proposed with project	Conclusion
			Disturbance	Emissions (construction)	Emissions (operation)			
	Section 4		Section 2.4	Section 2.5	Section 2.6	Section 2.7	Sections 5, 6	
Dunlin	SPA 004033	Possible but not recorded from immediate vicinity of site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Black-tailed Godwit	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Bar-tailed Godwit	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Curlew	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat	No significant impact	No significant impact	No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Redshank	SPA 004033	Yes – recorded in close proximity to site	Possibility of disturbance from additional noise, lighting and vehicles during construction; disturbance of feeding habitat			No significant cumulative negative impacts.	Carry out works on wetland habitats between April & September to minimise disturbance to over-wintering birds	No significant impact
Wetlands	SPA 004033	Yes – recorded within and in close proximity to site	In SPA, disturbance of wetland habitats while constructing storm overflow	Effluent spill during tank decommissioning; increased transportation = possible oil spills, contribution to increased sedimentation; these impacts could affect habitat for aquatic prey species	Discharge from storm overflow	No significant cumulative negative impacts	Agreed measures such as silt traps, use of bunded areas, etc.; mitigation work practices outlined in Section 6 for storm overflow construction; monitoring of storm overflow discharge	No significant impact

8 Appropriate Assessment Conclusion

The proposed works for the Fethard-On-Sea sewerage scheme (northern section) are located partly within the Bannow Bay SAC and Bannow Bay SPA. No permanent direct loss of Qualifying Interest habitats (saltmarsh, mudflats and wetlands) within the SAC or SPA is expected to occur if the mitigation measures detailed in Section 6 are followed.

No significant adverse impacts on Qualifying Interest bird species in the Bannow Bay SPA, or Annex I habitats in the Bannow Bay SAC, either alone or in combination with other plans or projects, including the southeastern section of the Fethard-On-Sea sewerage scheme, will occur in the future as long as the appropriate mitigation measures detailed in this NIS and the NIS relating to the southeastern part of the scheme (O'Neill & Perrin 2016) are implemented.

It is thus concluded that there will be no significant adverse effects from the northern section of the proposed sewerage system development at Fethard-On-Sea on the structure and function of Bannow Bay SAC, Bannow Bay SPA or any other Natura 2000 site. Nor will there be any significant adverse effect on the conservation objectives of the site or its Qualifying Interests.

It should be noted that this report is valid for this proposed project only and any changes to this project must be subjected to the Appropriate Assessment process.

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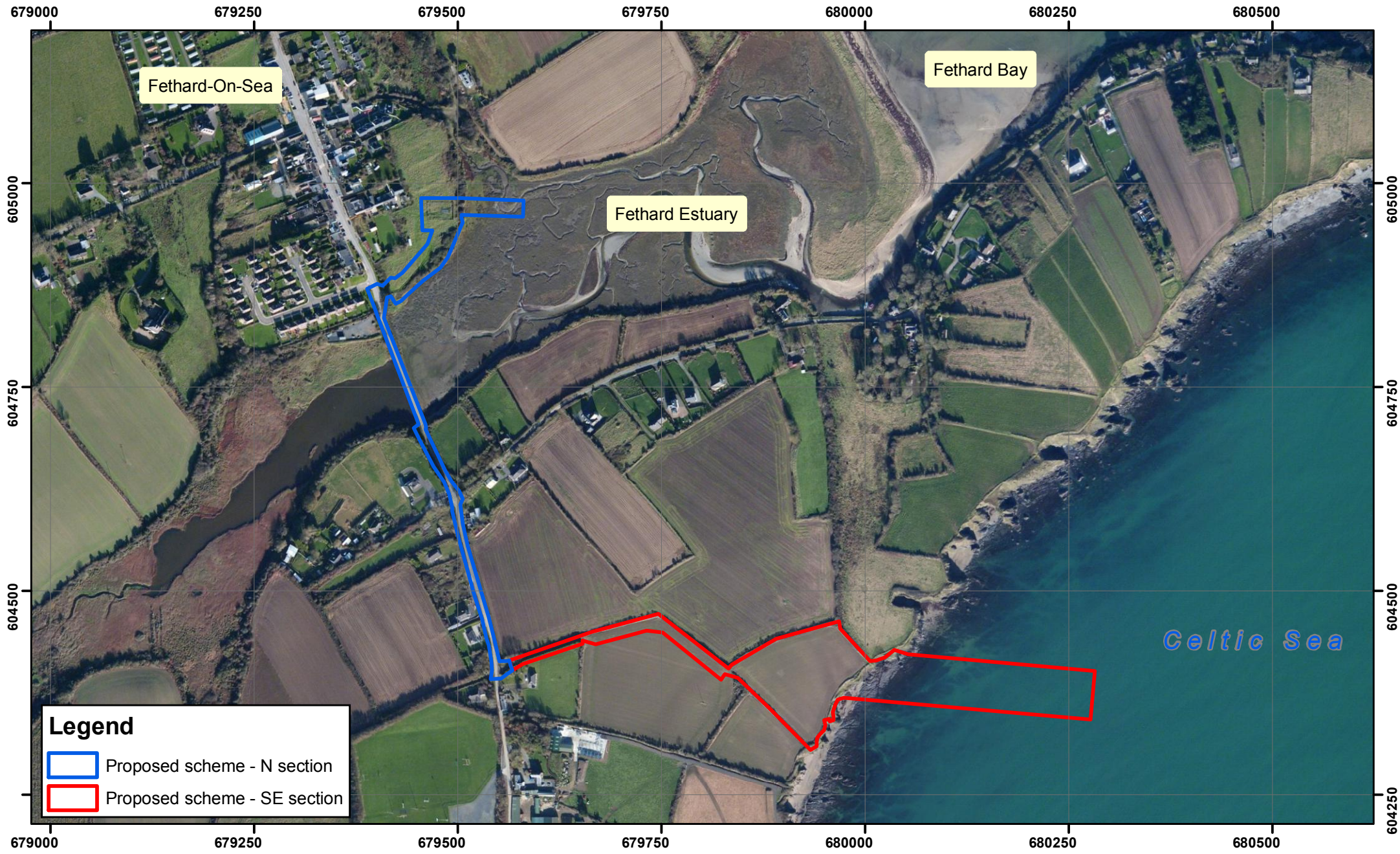
Appendix 1: Fethard-On-Sea proposed sewerage scheme - Location of works



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Map Projection: IRENET95 Irish Transverse Mercator

1:6,000

0 62.5 125 250 Meters

bec CONSULTANTS

Appendix 2: Site photographs of northern section of proposed scheme

Plate 1. Mudflats and sandflats

Plate 2. Atlantic salt meadows (with *Spartina anglica*)

Plate 3. Existing primary settlement tank

Plate 4. Fethard Bridge

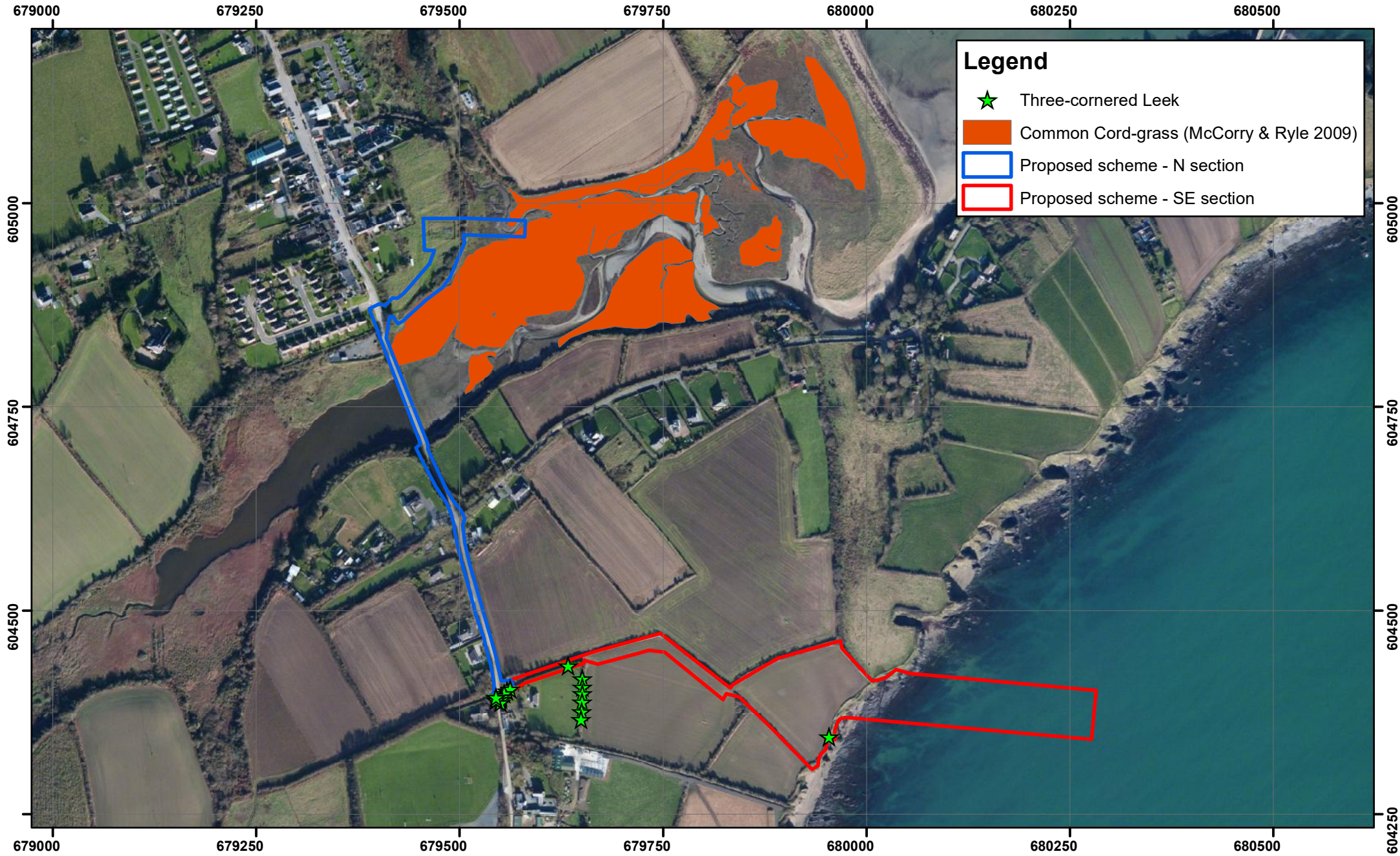
Plate 5. East of Fethard Bridge

Plate 6. West of Fethard Bridge

Plate 7. R734 south of Fethard Bridge

Plate 8. R734 south of Fethard Bridge

Appendix 3: Fethard-On-Sea proposed sewerage scheme - Location of Alien Invasive Species



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Map Projection: IRENET95 Irish Transverse Mercator

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0 62.5 125 250 Metres

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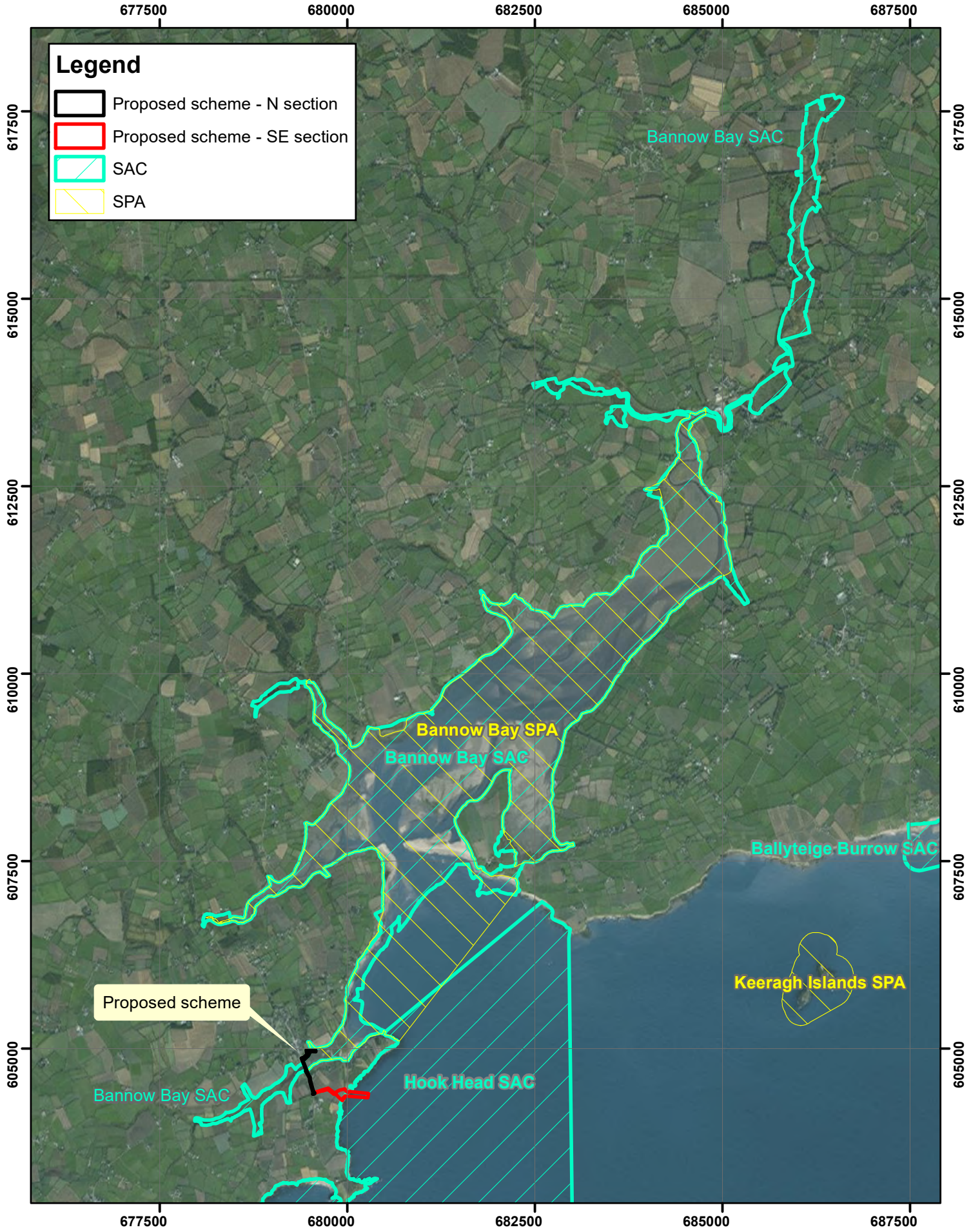
Appendix 4: Fethard-On-Sea works in relation to Natura 2000 network
(a) Overall context



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

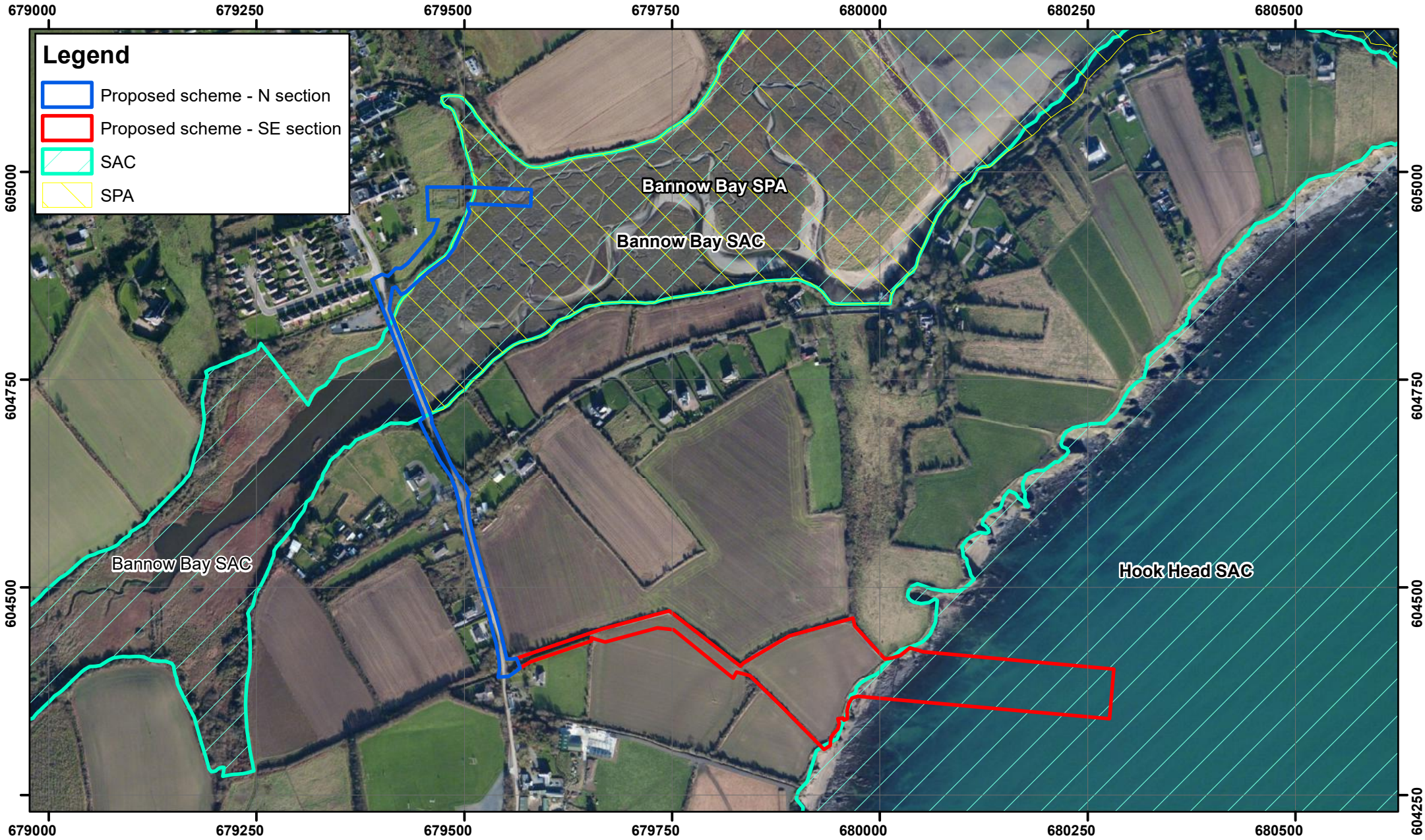
Map Projection: IRENET95 - ITM

1:65,000

0 0.5 1 2 Kilometres

bec CONSULTANTS

Appendix 4: Fethard-On-Sea works in relation to Natura 2000 network
(b) Local context



N

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Map Projection: IRENET95 Irish Transverse Mercator

1:6,000

0 65 130 260 Metres

Appendix 5: Consultation – Response from Development Applications Unit

Received 2nd June 2016

An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

Your Ref:
Our Ref: **G Pre00141/2016** *(Please quote in all related correspondence)*

02 June 2016

Fionnuala O'Neill PhD, MCIEEM
Senior Ecologist
www.botanicalenvironmental.com

Via email to foneill@botanicalenvironmental.com

Re: Request for nature conservation observations for proposed Wastewater treatment plant at Fethard, Co. Wexford

A chara

On behalf of the Department of Arts, Heritage and the Gaeltacht, I refer to correspondence received in connection with the above. Outlined below are heritage-related observations/recommendations of the Department under the stated heading(s).

Nature Conservation

The applicant has requested scoping information for a NIS. However there are other issues that also need to be considered. In particular it should be noted by the applicant that the protected plant Perennial Glasswort (*Arthrocnemum perenne*) occurs in the vicinity of the proposed development. Therefore a survey will be necessary and a licence may need to be applied for. The applicant should complete a data request form requesting the data for this rare plant from the National Parks and Wildlife Service (NPWS) of this Department. This can be found at http://www.npws.ie/maps-and-data/request-data . It should also be noted that the saltmarsh monitoring project of this Department mapped this area and the reports can be found at the publications section of www.npws.ie .

In addition it appears that the development is adjacent to a peregrine falcon nest site and the impact on these birds needs to be assessed.

Please find below some general scoping comments for appropriate assessment screening and appropriate assessment as well as licensing requirements.

Appropriate Assessment

Guidance

With regard to appropriate assessment (AA) and screening for AA, some Guidance documents are referred to below which may help. However CJEU case law has to some

extent clarified certain issues and should be consulted. In particular case C-258/2011-N6 Galway City Outer Bypass is relevant as is the recent opinion on the Briels case, C-521/12.

Guidance on AA is available in the Departmental guidance document on Appropriate Assessment, which is available on the NPWS web site at http://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf and in the EU Commission guidance entitled "*Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*" which can be downloaded from http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

Conservation objectives

In order to carry out the appropriate assessment screening, and/or prepare the Natura Impact Statement (NIS), information about the relevant Natura 2000 sites including their conservation objectives will need to be collected. Details of designated sites and species and conservation objectives can be found on www.npws.ie . Site-specific, as opposed to generic, conservation objectives are now available for some sites. Each conservation objective for a qualifying interest is defined by a list of attributes and targets and is often supported by further documentation. Where these are not available for a site, an examination of the attributes that are used to define site-specific conservation objectives for the same QIs in other sites can be usefully used to ensure the full ecological implications of a proposal for a site's conservation objective and its integrity are analysed and assessed. It is advised, as per the notes and guidelines in the site-specific conservation objectives, that any reports quoting conservation objectives should give the version number and date, so that it can be ensured and established that the most up-to-date versions are used in the preparation of Natura Impact Statements and in undertaking appropriate assessments.

Where further detail is required on any information on the website www.npws.ie , a data request form should be submitted. This can be found at http://www.npws.ie/maps-and-data/request-data .

Cumulative and ex situ impacts

A rule of thumb often used is to include all Natura 2000 sites within a distance of 15km. It should be noted however that this will not always be appropriate. In some instances where there are hydrological connections a whole river catchment or a groundwater aquifer may need to be included. Similarly where bird flight paths are involved the impact may be on an SPA more than 15 km away.

Other relevant Local Authorities should be consulted to determine if there are any projects or plans which, in combination with this proposed development, could impact on any Natura 2000 sites

Alien invasive species

If the proposed development is adjacent to a Natura 2000 site and involves landscaping or a garden, care should be taken to ensure that no terrestrial or aquatic invasive species are used which could impact negatively on these sites. Information on alien

invasive species in Ireland can be found at http://invasives.biodiversityireland.ie/ and at http://invasivespeciesireland.com/ .

CMPs

Complete project details including construction management plans (CMPs) need to be provided in order to allow an adequate appropriate assessment to be undertaken. Applicants need to be able to demonstrate that CMPs and other such plans are adequate and effective mitigation, supported by scientific information and analysis, and that they are feasible within the physical constraints of the site. The positions, locations and sizes of construction infrastructure and mitigation, such as settlement ponds, disposal sites and construction compounds, may significantly affect European sites, designated sites, habitats, and species in their own right and could have an effect for example on drainage, water quality, habitat loss, and disturbance. If these are undetermined at time of the assessment, all potential effects of the development on the site are not being considered. If applicants are not in a position to decide the exact location and details of these at time of application, then they need to consider the range of options that may be used in their assessment so that all issues are covered. The CMP should also include methods to ensure invasive alien species are not introduced or spread.

Licences

Where there are impacts on protected species and their habitats, resting or breeding places, licences may be required under the Wildlife Acts or derogations under the Habitats Regulations. In particular bats and otters are strictly protected under annex IV of the Habitats Directive and a copy of Circular Letter NPWS 2/07 entitled "*Guidance on Compliance with Regulation 23 of the Habitats Regulations 1997 – strict protection of certain species/applications for derogation licences*" can be found on the Departmental website at http://www.npws.ie/sites/default/files/general/circular-npws-02-07.pdf. It should be noted however that this Regulation has been replaced by SI 477 of 2011 and that section 53 is the relevant section.

In addition licences will be required if there are any impacts on other protected species or their resting or breeding places, such as on protected plants, badger setts or birds' nests. Where possible hedges and trees should not be removed during the nesting season (i.e. March 1st to August 31st). Birds' nests can only be intentionally destroyed under licence issued under the Wildlife Acts of 1976 to 2012.

In order to apply for any such licences or derogations as mentioned above the results of a survey should be submitted to the National Parks and Wildlife Service of this Department. Such surveys are to be carried out by appropriately qualified person/s at an appropriate time of the year. Details of survey methodology should also be provided. Such licences should be applied for in advance of planning to avoid delays and in case project modifications are necessary.

Should the survey work take place well before construction commences, it is recommended that an ecological survey of the development site should take place immediately prior to construction to ensure no significant change in the baseline ecological survey has occurred. If there has been any significant change mitigation may require amendment and where a licence has expired, there will be a need for new licence applications for protected species.

In order to apply for any such licences or derogations as mentioned above the results of a survey should be submitted to the National Parks and Wildlife Service of this Department which should have been carried out by appropriately qualified person/s at an appropriate time of the year. Details of survey methodology should also be provided. Such licences should be applied for in advance of planning to avoid delays and in case project modifications are necessary.

The above observations and recommendations are based on the papers submitted to this Department on a pre-planning basis and are made without prejudice to any observations the Minister may make in the context of any consultation arising on foot of any development application referred to the Minister, by a planning authority, in her role as statutory consultee under the Planning and Development Act 2000, as amended.

You are requested to send further communications to this Department's Development Applications Unit (DAU) at **manager.dau@ahg.gov.ie** (team monitored); if this is not possible, correspondence may alternatively be sent to:

The Manager
Development Applications Unit (DAU)
Department of Arts, Heritage and the Gaeltacht
Newtown Road
Wexford
Y35 AP90

Le meas

Yvonne Nolan,
Development Applications Unit

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